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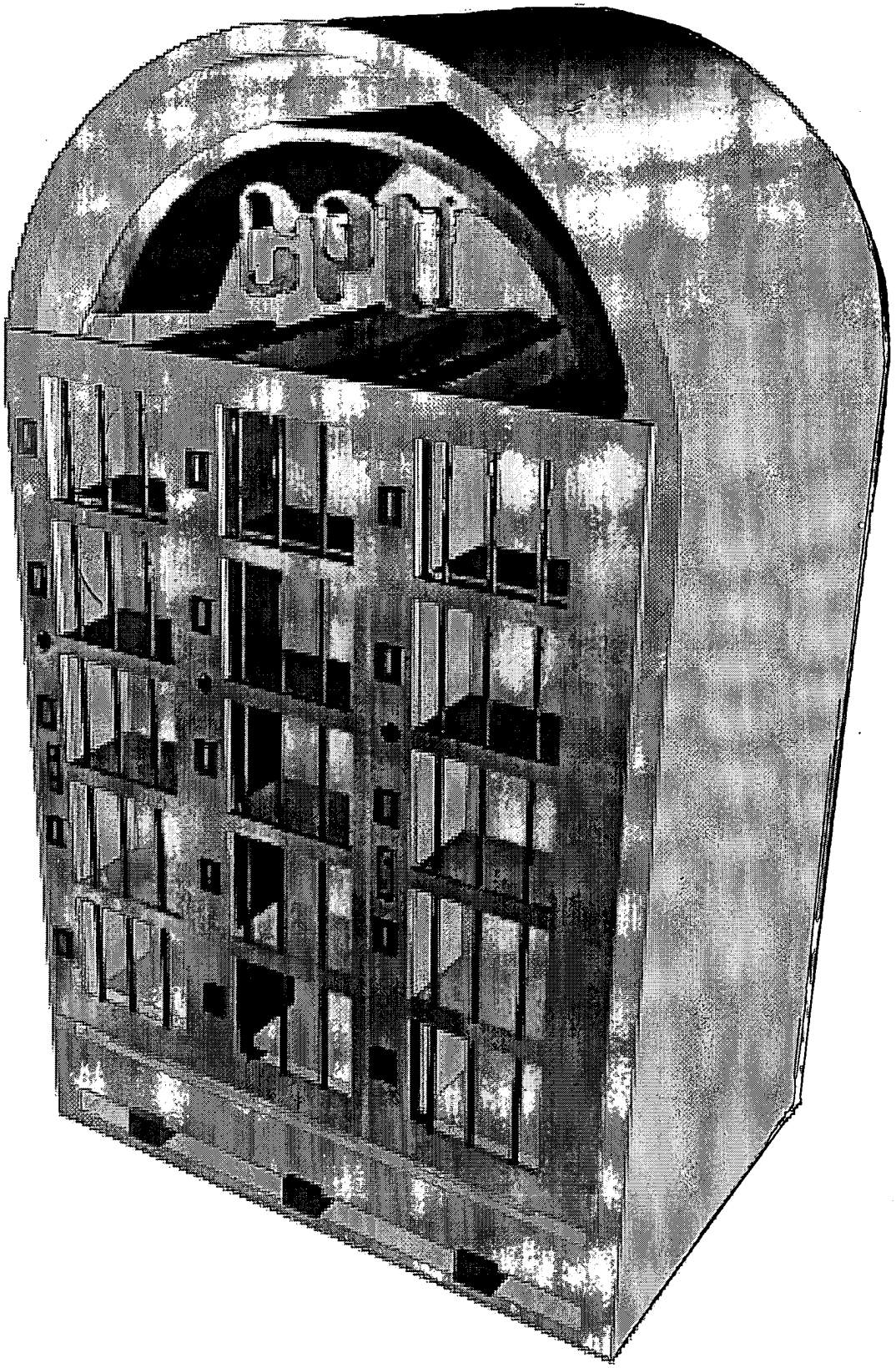

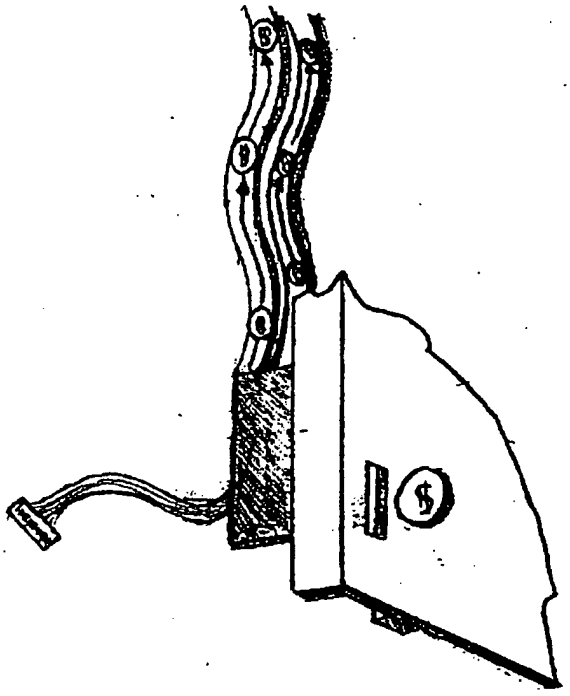

Fig 11

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FIG 111

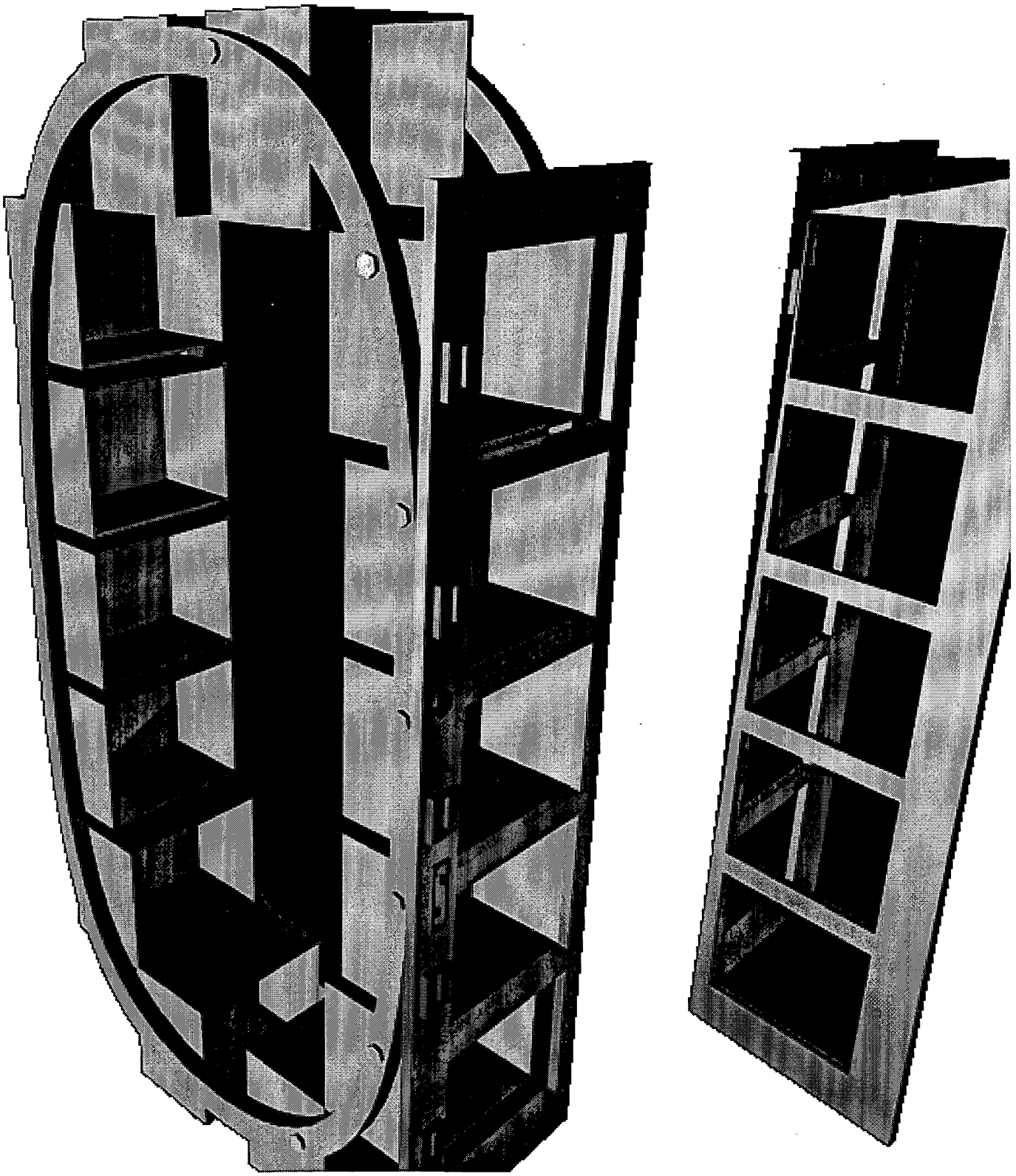

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FIG IV

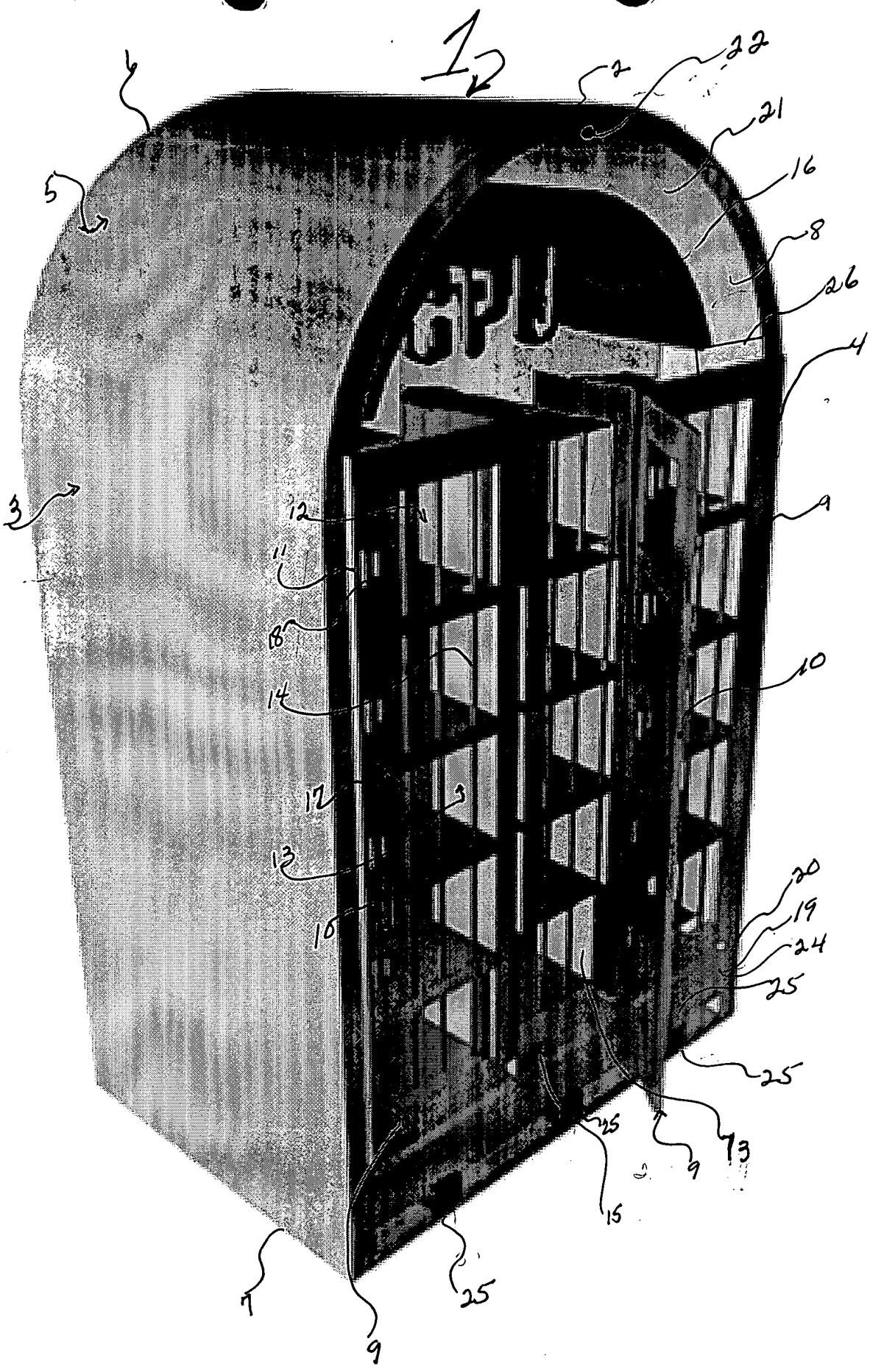

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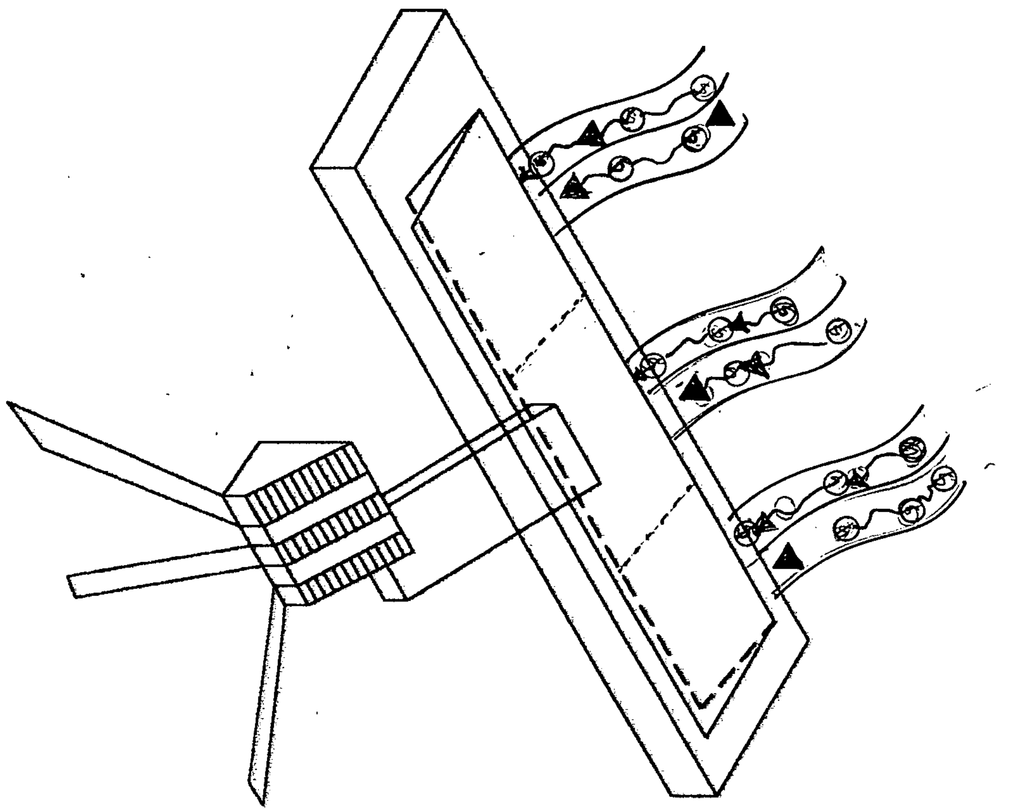
FIG V



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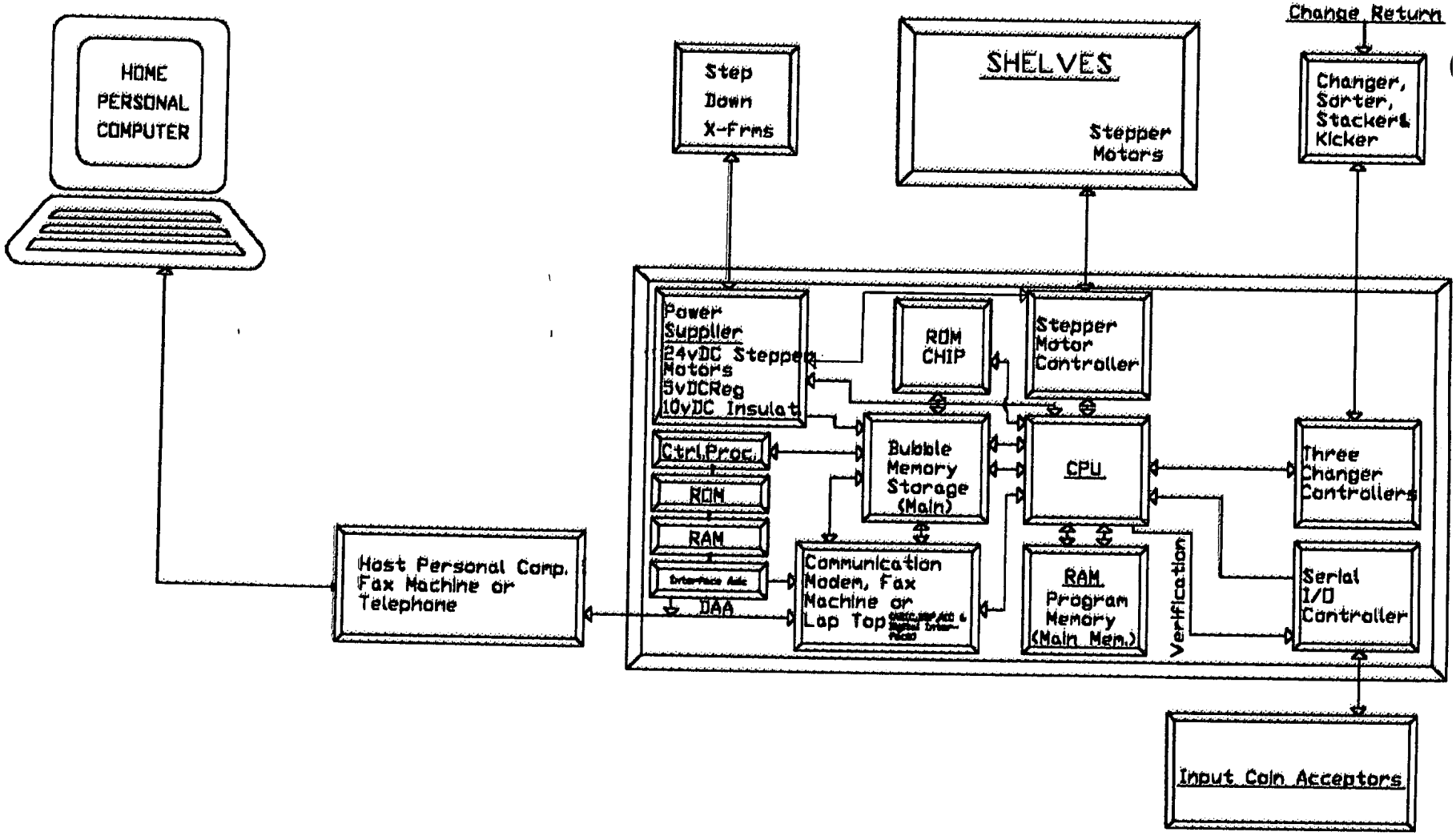
File Date 6-12-95

Fig VI



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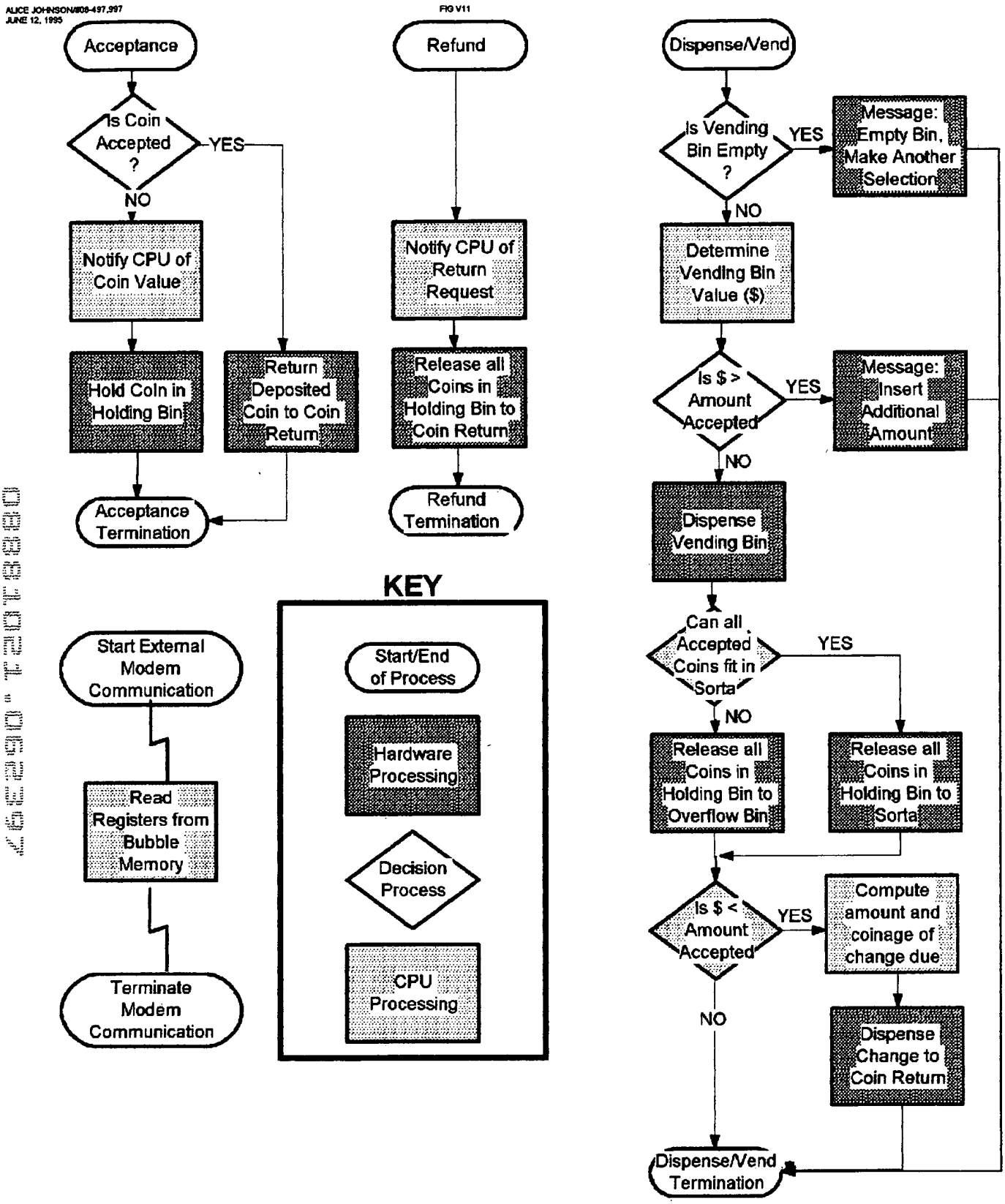
File #08-497-997

FIG VII



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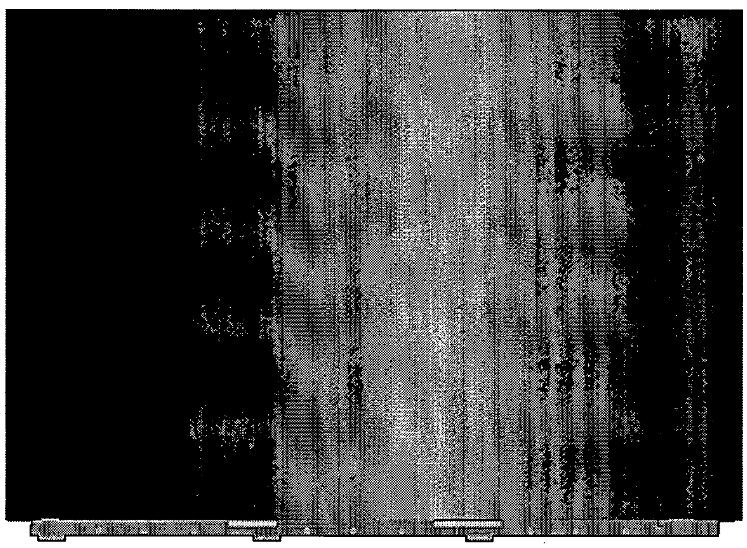
File Date June 12, 1995
File #08 497,997

FIG VIII



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File # 08-491-991

FIG IX

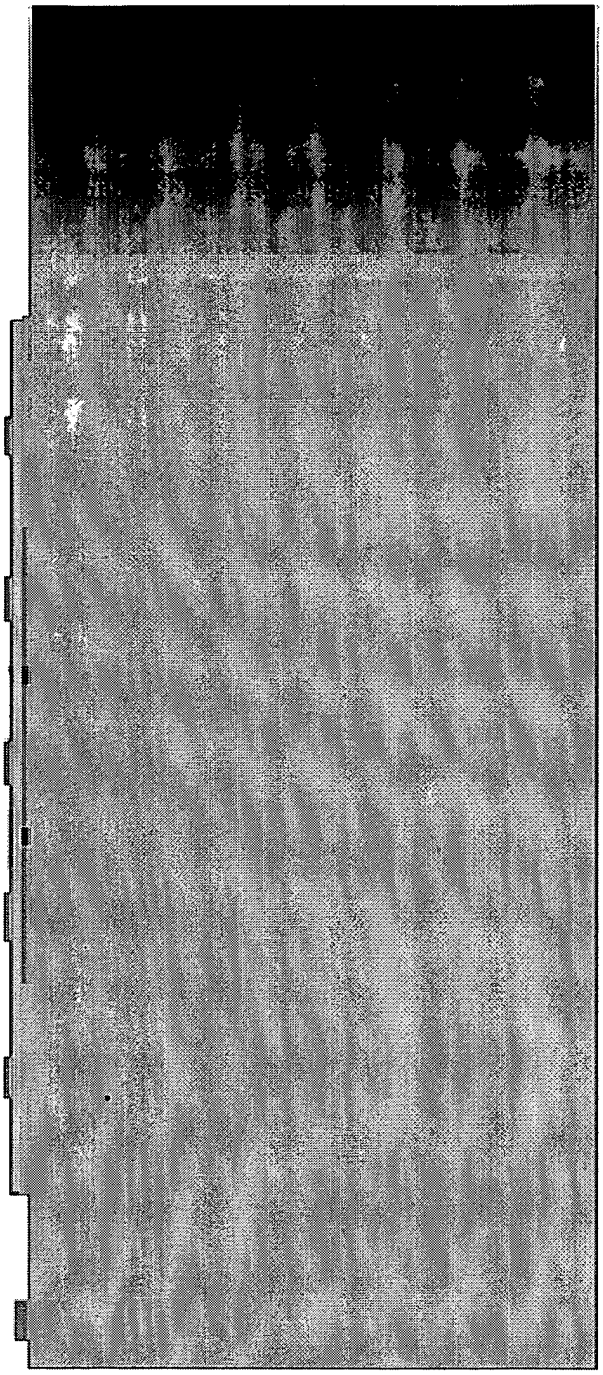

FIG 10 (1 OF 2)

CPU Processing

Process 1 - Coin Accepted

Add 1 to Count of coins for the value of the coin accepted
(i.e. if the second nickel was entered, the count of nickels would be 2)
Compute the total value of all coins accepted
(Add value of coin accepted to acceptors' accumulated value)

Process 2 - Refund Requested

Zero all Counts of coins for the specific acceptor
Zero acceptors' accumulated value (total value of all coins accepted is reset to zero)

Process 3 - Accepted Coins to the Overflow Bin

By Coin type
Add the number of coins accepted to the number of coins in the coin bin
Compute the Value of coins in the Overflow Bin by multiplying Coin Value times Coin Count

Compute the total value of all coins in the Overflow Bin
(Sum the value of all coins by coin type)

Process 4 - Accepted Coins to the Changer (Sorta)

By Coin type
Add the number of coins accepted to the number of coins in the coin sorta
Compute the Value of coins in the sorta by multiplying Coin Value times Coin Count

Compute the total value of all coins in the Sorta
(Sum the value of all coins by coin type)

Process 5 - Dispense Change

Compute the amount of change to be dispensed by subtracting the value of the product from the amount accepted
Use the following table to determine the count of coins, by type, to be returned to the coin return:

Change	Nickels	Dimes	Quarters
$ 0.05	1	0	0
$ 0.10	0	1	0
$ 0.15	1	1	0
$ 0.20	0	2	0
$ 0.25	0	0	1
$ 0.30	1	0	1
$ 0.35	0	1	1
$ 0.40	1	1	1
$ 0.45	0	2	1
$ 0.50	0	0	2
$ 0.55	1	0	2
$ 0.60	0	1	2
$ 0.65	1	1	2
$ 0.70	0	2	2
$ 0.75	0	0	3
$ 0.80	1	0	3
$ 0.85	0	1	3
$ 0.90	1	1	3
$ 0.95	0	2	3

Fig 10

FIG X (2 of 2)

The Acceptance Process

If the coin is accepted
then Notify the CPU as to type of coin (value) and Acceptor Id (CPU Process 1)
Save the coin in a holding bin
else (rejected)
Route coin to the Coin Return

The Refund Process

Notify the CPU that a return was requested (CPU Process 2)
Release all coins in the Holding Bin (for the acceptor) to the Coin Return

Dispense/Vend Process

If Vending Bin is Empty,
then no transaction takes place
Message to operator, "Empty Bin, Make Another Selection"
Terminate Dispense/Vend Process

If Vending Bin is Full (default if processing logic passes to this point)
Determine value of Vending Bin (y) Indicator (as each bin can vary in price)
Determine amount accepted in Holding Bin (x) Indicator
If Vending Bin (y) Indicator is greater than Holding Bin (x) Indicator
then Message to Operator "Insert Additional Amount"
Terminate Dispense/Vend Process
Dispense Vending Bin
If "Sorta/Changer Full" Indicator
then Release all Coins in Holding Bin (x) to Overflow Bin
notify the CPU that a sale was completed (CPU Process 3)
else Release all Coins in Holding Bin (x) to Sorta/Changer
notify the CPU that a sale was completed (CPU Process 4)
If Vending Bin (y) Indicator is less than Holding Bin (x) Indicator [change due]
then Compute amount and coinage of change due (CPU Process 5)
Dispense Change to the Coin Return (x)
Terminate Dispense/Vend Process
else Terminate Dispense/Vend Process

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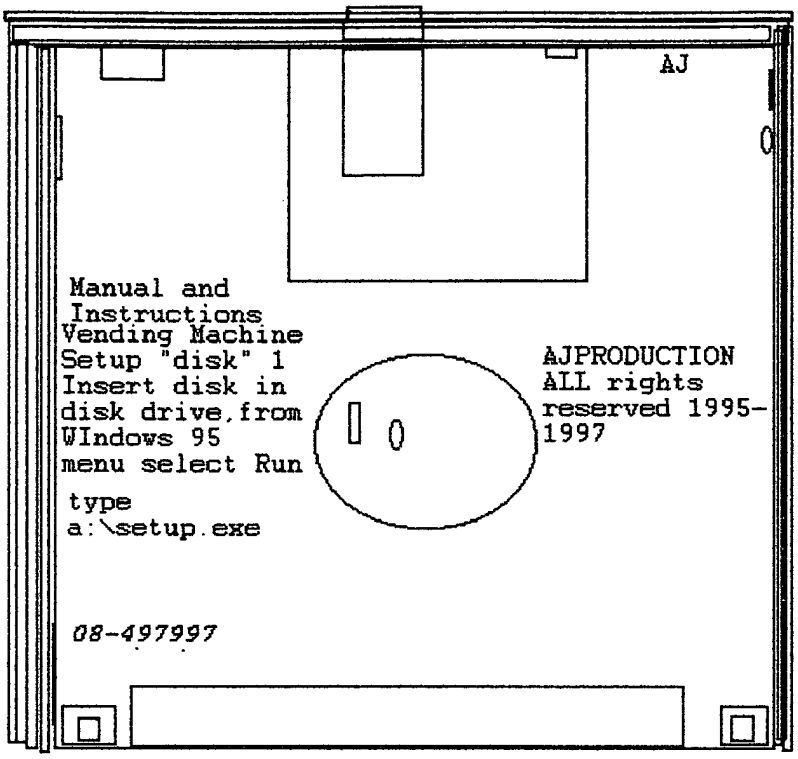

FIG X1

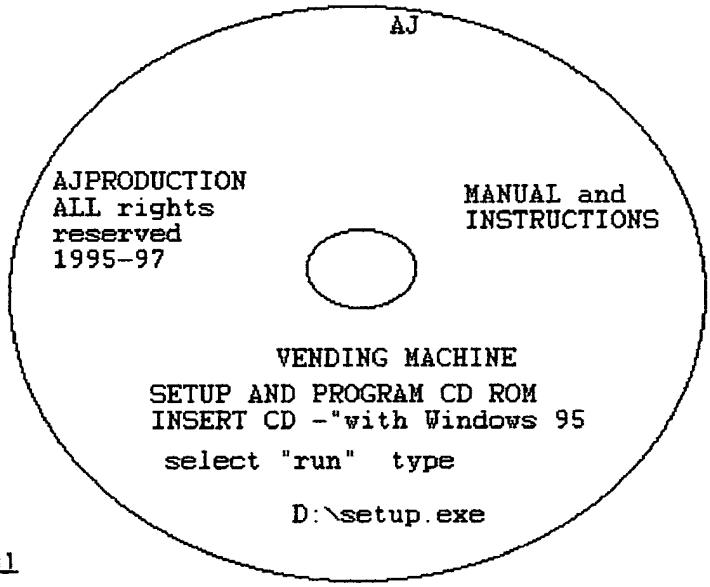

FIG X11

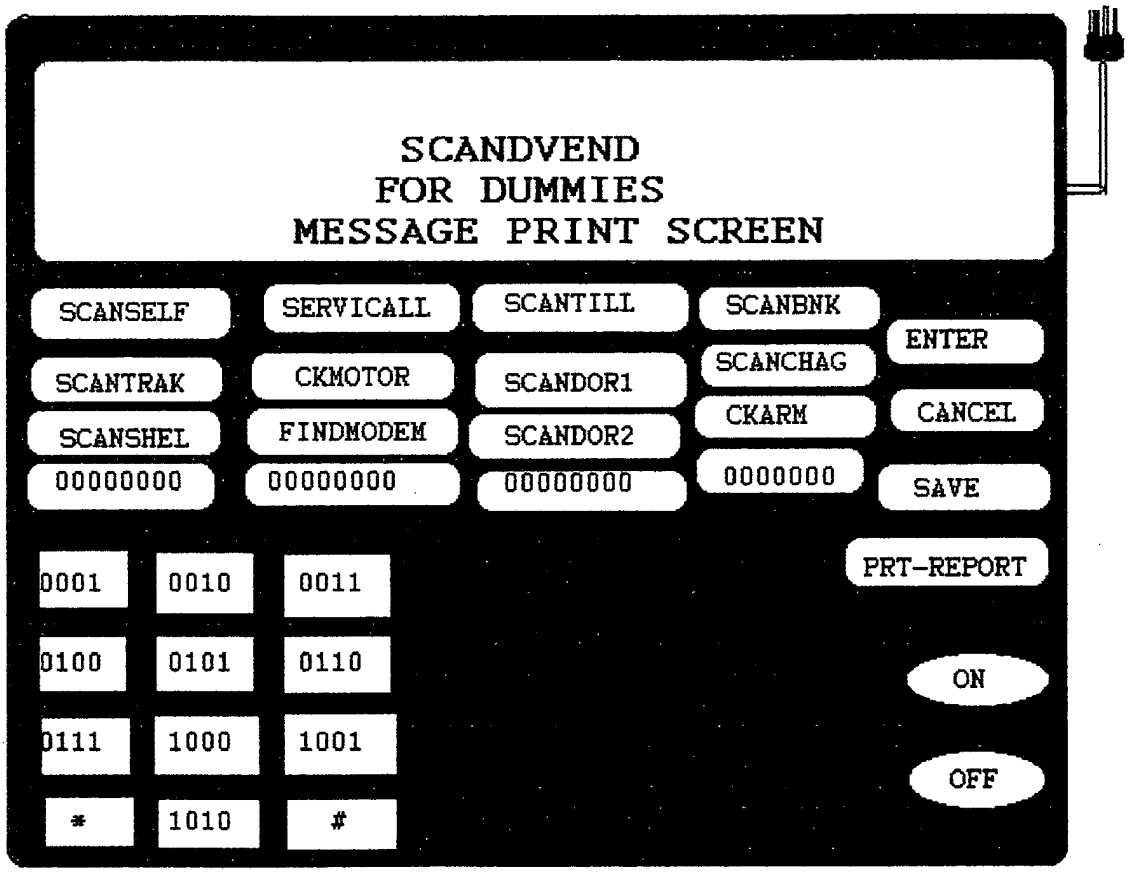

FIG X111

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FIG XV

Hardware Considerations and Terms

Coin Acceptor

Accepts coins by verifying their value and authenticity. Those coins rejected are routed immediately to the coin return. Coins accepted are routed to the Holding Bin pending refund or vending.

Holding Bin

Area in which all coins are collected for a given acceptor. Coins are released upon request for refund or the vending of the product.

Coin Return

Area which un-accepted coins, full refund (canceled selection) and change is returned to the customer.

Sorta / Changer

Unit that sorts coins to be used in preparing change upon overpayment into "tubes" by coin type. Unit also selects the proper number of coins to be dispensed in the process of making change.

Overflow Bin

Container of all coins from purchases which would not "fit" into the Sorta / Changer at the time of sale.

Assumptions:

All processing is described as if it were a single unit. The only shared component that needs to maintain which Acceptor / Vending Unit is being processed is the Sorta / Changer. This is to insure that the change being delivered is "routed" to the appropriate Coin Return.

CPU/Software Considerations and Terms

Accumulators

Counter in memory which counts the number of items. For each coin type being monitored (nickels, dimes, and quarters) there are three unique accumulators. For each item being tracked there is one set of three accumulators. Items being tracked would include, but not limited to: Coins in Holding Bin 1, Coins in Holding Bin 2, Coins in Holding Bin 3, Maximum Coins in Sorta/Changer, Minimum Coins in Sorta/Changer, Current Coins in Sorta/Changer, Current Coins in Overflow Bin, etc.

Indicators

Indicators are switches in memory that indicate specific conditions. These switch settings are checked after every transaction is processed through the CPU.

- The "No Change" indicator is set if any accumulator in Current Coins in Sorta/Changer is less than the corresponding accumulator in Minimum Coins in Sorta/Changer.
- The "Sorta/Changer Full" Indicator is set if any accumulator in Current Coins in Sorta/Changer plus the corresponding accumulator in Coins in Holding Bin (x) is greater than or equal to the corresponding accumulator in Maximum Coins in Sorta/Changer.
- The "Value in Holding Bin (x)" contains the computed value of all coins accepted by the corresponding Coin Acceptor.
- The "Value of Vending Bin (y)" contains the predetermined value of the product to be dispensed from bin (y). This value is set by the operator, and may not be changed by the customer.

Alice Johnson/ #08-497,997
June 12, 1995

WINDOW MESSAGING

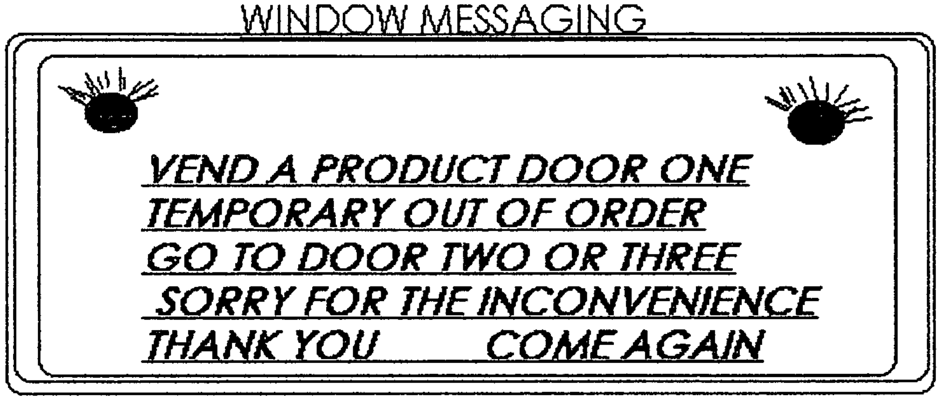

FIG XV